AMENDMENTS TO THE CLAIMS (CLEAN VERSION)

Please amend the claims as follows.

1. (Currently Amended) A method for detecting an object in a detection region, comprising:

placing a reflector in the detection region;

radiating the detection region with a radio wave transmitted from a transmission antenna;

receiving a reflected wave reflected by the reflector using a reception antenna;

calculating a position of the reflector based on the reflected wave; and

storing the calculated position as the detection region.

2. (Currently Amended) A method for detecting an object in a detection region, comprising:

placing a transmitter in the detection region;

receiving a radio wave from the transmitter using a reception antenna;

calculating a position of the transmitter based on the radio wave from the transmitter; and

storing the calculated position as the detection region.

3. (Currently Amended) The method of claim 2, further comprising:

inputting a setting value;

transmitting the inputted setting value using the transmitter;

determining the detection region based on the setting value; and

storing the detection region.

4. (Currently Amended) A method for detecting an object in a detection region, comprising:

placing a setting apparatus comprising a reflector and a transmitter in the detection region;

receiving a radio wave from the setting apparatus using a reception antenna;

radiating the detection region with a radio wave transmitted from a transmission antenna,

receiving a reflected wave reflected by the setting apparatus using the reception antenna;

calculating a position of the setting apparatus based on the radio wave from the setting apparatus and the reflected wave; and

storing the calculated position as the detection region.

5. (Currently Amended) A method for confirming a position of an object in a detection region, comprising;

placing a reflector in the detection region;

radiating the detection region with a radio wave transmitted from a transmission antenna;

receiving a reflected wave reflected by the reflector using a reception antenna;

calculating a position of the reflector based on the reflection wave;

comparing the calculated position with a stored detection region; and

outputting a detection signal when the calculated position is in the detection region.

6. (Currently Amended) A method for confirming a position of an object in a detection region, comprising;

placing a transmitter in the detection region;

transmitting a radio wave from the transmitter; and

comparing a position of the transmitter that is calculated based on the radio wave with a stored detection region; and

outputting a detection signal when the position of the transmitter is in the detection region.

7. (Currently Amended) An intruding object detecting apparatus for detecting an object within a detection region, comprising:

a transmission antenna configured to radiate a radio wave;

a reception antenna configured to receive a reflected wave;

scanning means configured to alter directions of the transmission antenna and the reception antenna;

calculation means configured to calculate a position of the object based on the reflection wave received by the reception antenna and a direction thereof obtained by the scanning means;

storage means configured to store a predetermined setting value that corresponds to the detection region; and

comparing means configured to compare the position of the object specified by the calculation means and the detection region specified by the setting value stored in the storage means.

8. (Currently Amended) The intruding object detecting apparatus of claim 7, wherein the setting value is set in advance based on a reflector that reflects the radio wave radiated from a transmission antenna of the intruding object detecting apparatus in an almost incident direction of the radio wave with an opposite sign.

9. (Currently Amended) The intruding object detecting apparatus of claim 7, wherein the setting value is set in advance based on a transmitter that transmits the radio wave having a frequency capable of being received by a reception antenna of the intruding object detecting apparatus.

10. (Currently Amended) The intruding object detecting apparatus of claim 9, further comprising:

input means configured to input the setting value; and

transmitting means configured to transmit the setting value.

11. (Currently Amended) The intruding object detecting apparatus of claim 7, wherein the setting value is set in advance based on a setting apparatus comprising: comprising:

a reflector configured to reflect the radio wave from the transmission antenna in an almost incident direction with an opposite sign; and

a transmitter configured to transmit the reflected radio wave with a frequency that is receivable by the reception antenna.